

AMENDMENTS TO THE CLAIMS

Please enter the following amendments.

1. (Currently Amended) A method for treating **a backing element comprising a gasket for forming a sealed array assay chamber when joined to a microarray substrate at least one member of a backing element/microarray assembly structure**, said method comprising at least one of: (1) depositing a component on said **gasket at least one member**, (2) extracting a component from said **gasket at least one member**, (3) surface modifying said **gasket at least one member**, to treat said **gasket at least one member of a backing element/microarray assembly structure**.
2. (Currently Amended) The method of Claim 1, wherein said method comprises depositing a component on said **gasket at least one member of a backing element/microarray assembly structure** and said depositing comprises performing a SiO₂ deposition protocol.
3. (Currently Amended) The method of Claim 1, wherein said method comprises extracting a component from said **gasket at least one member of a backing element/microarray assembly structure**.
4. (Currently Amended) The method of Claim 3, wherein said method comprises contacting said **gasket at least one member of a backing element/microarray assembly structure** with at least one of a liquid phase and a vapor phase.
5. (Currently Amended) The method of **Claim 3 Claim 4**, wherein said component comprises moieties that may **adversely** affect **a microarray assay an array** or its reading.
6. (Currently Amended) The method of Claim 5, wherein said moieties are removed **from said gasket at least from a gasket of said backing element/microarray assembly structure**.

7. (Original) The method of Claim 5, wherein said moieties comprise low-melting point monomers or truncated polymers.
8. (Currently Amended) The method of Claim 7, wherein said low-melting point monomers are ~~D4-D20 series~~ linear or cyclic siloxanes.
9. (Currently Amended) The method of Claim 4, wherein said extracting extraction comprises contacting said gasket at least one member of a backing element/microarray assembly structure with at least one solvent to extract said component.
10. (Original) The method of Claim 9, wherein said at least one solvent is an aqueous solvent.
11. (Currently Amended) The method of Claim 9 ~~Claim 10~~, wherein said at least one solvent is an organic solvent.
12. (Canceled)
13. (Canceled)
14. (Original) The method of Claim 11, wherein said organic solvent is a non-polar organic solvent.
15. (Currently Amended) The method of Claim 14, wherein said non-polar organic solvent is chosen from aliphatic hydrocarbons, aromatic hydrocarbons, and ethers ~~and~~ glymes.
16. (Currently Amended) The method of Claim 1, wherein said method comprises surface modifying said gasket at least one member of a backing element/microarray assembly structure.

17. **(Currently Amended)** The method of Claim 16, wherein said surface modification comprises contacting said gasket ~~at least one member of a backing element/microarray assembly structure~~ with a plasma.

18. **(Currently Amended)** The method of Claim 17, wherein said plasma is produced from a gas selected from the group consisting of nitrogen, air, argon, oxygen, nitrous oxide, helium, water vapor, carbon dioxide, methane, and combinations thereof.

19.-24. **(Canceled)**

25. **(Currently Amended)** The method of Claim 16, wherein said surface modification comprises:

- (a) introducing soluble particulates to ~~uncured~~ said gasket ~~material~~,
- (b) curing said gasket ~~material~~, and
- (c) solubilizing said soluble particulates to provide a ~~said~~ textured gasket surface.

26. **(Currently Amended)** The method of Claim 1, wherein said treating treatment comprises oxidizing said gasket ~~at least one surface of said at least one member of a backing element/microarray assembly structure~~.

27. **(Currently Amended)** The method of Claim 1, wherein said treating treatment comprises increasing the hydrophilicity of said gasket ~~at least one member of a backing element/microarray assembly structure~~.

28. **(Currently Amended)** The method of Claim 1, wherein said treating treatment provides a seal about said gasket ~~at least elastomeric gasket of said backing element/microarray assembly structure~~.

29. **(Currently Amended)** The method of Claim 1, wherein said treating treatment comprises sequentially contacting said gasket ~~at least one member of a backing~~

~~element/microarray assembly structure~~ with at least two of: plasma, UV with O₂
~~UV/O₂~~ and a solvent.

30.-39. (Canceled)

40. (New) The method of Claim 15, wherein said ether is a glyme.

41. (New) A method for treating a backing element comprising a gasket for forming a sealed array assay chamber when joined to a microarray substrate, said method comprising extracting a component from said gasket to treat said gasket.

42. (New) The method of Claim 41, wherein said method comprises contacting said gasket with at least one of a liquid phase and a vapor phase.

43. (New) The method of Claim 41, wherein said component comprises moieties that may affect said microarray or its reading.

44. (New) The method of Claim 43, wherein said moieties are removed from said gasket.

45. (New) The method of Claim 43, wherein said moieties comprise low-melting point monomers or truncated polymers.

46. (New) The method of Claim 45, wherein said low-melting point monomers are linear or cyclic siloxanes.

47. (New) The method of Claim 42, wherein said extracting comprises contacting said gasket with at least one solvent to extract said component.

48. (New) The method of Claim 47, wherein said at least one solvent is an aqueous solvent.

49. **(New)** The method of Claim 47, wherein said at least one solvent is an organic solvent.
50. **(New)** The method of Claim 49, wherein said organic solvent is a non-polar organic solvent.
51. **(New)** The method of Claim 50, wherein said non-polar organic solvent is chosen from aliphatic hydrocarbons, aromatic hydrocarbons, and ethers.
52. **(New)** The method of Claim 51, wherein said ether is a glyme.
53. **(New)** A method for treating a backing element comprising a gasket for forming a sealed array assay chamber when joined to a microarray substrate, said method comprising surface modifying said gasket to treat said gasket.
54. **(New)** The method of Claim 53, wherein said surface modification comprises contacting said gasket with a plasma.
55. **(New)** The method of Claim 54, wherein said plasma is produced from a gas selected from the group consisting of nitrogen, air, argon, oxygen, nitrous oxide, helium, water vapor, carbon dioxide, methane, and combinations thereof.
56. **(New)** The method of Claim 53, wherein said surface modification comprises:
- (d) introducing soluble particulates to said gasket,
 - (e) curing said gasket, and
 - (f) solubilizing said soluble particulates to provide a textured gasket surface.